

mSeaBASS Submission Checklist:

Chromophoric Dissolved Organic Matter (CDOM)

Please fill out the Collection, Measurement, and Analysis sections to the best extent possible. Rename this file to be specific to your data, e.g.

“checklist_CDOM_MyCruiseName.rtf”

Experiment Name

Cruise Name

Plumes and Blooms

I. SAMPLE COLLECTION METHODS

**1) How were the samples collected in the field? (e.g. Niskin bottle, surface pump, bucket)
If applicable, were samples taken on upcast or downcast?**

Niskin Bottle

2) Where were they collected (coastal, offshore, estuarine, etc.) and at what general depths?

Coastal, surface.

3) How were samples filtered? (e.g., vacuum pump, peristaltic, syringe, vacuum jar, etc.)

Vacuum pump

4) What type of filter and pore size was used to filter? (e.g. flat disk, capsule, syringe filter, etc.)

Millipore 0.2 μm

5) Approximately how long after collection were the water samples filtered?

24 hours

6) Approximately how long were the filtered samples stored before analysis?

24 hours

7) How were the samples stored? (e.g. refrigerated, frozen, acidified, etc.)

Refrigerated

8) In what type of bottle/container were the samples stored? (e.g. amber glass, high or low density poly-ethylene (HDPE, LDPE), Nalgene, etc.)

Qorpak amber glass bottles

II. Sample Analysis Methods

1) List instrument manufacturer and model

Shimadzu UV-2401

2) What type of spectrophotometer was used (dual or single beam, waveguide, integrating sphere, etc.)? For benchtop specs, what was the cuvette size (1, 5, or 10 cm)? For Waveguides, what was the effective pathlength of the instrument either measured by the manufacturer or by the researcher?

Dual beam, 10 cm quartz cuvette

3) Provide instrument settings

integration time:

scan speed: 1200nm/min

slit width: 2nm

smoothing:

wavelength range and increment: 250-750nm, 1nm increment

other:

4) Were the samples re-filtered before the spectrophotometric analysis? No

5) Was a solution of Suwanee River Fulvic Acid (SRFA) measured during the analysis?

What was the concentration of the solution? See Mannino et al. 2019 for more information.

III. Data Analysis Methods:

1) If there were replicates or multiple scans, were they averaged and was the variability reported?

No replicate, two averaged scans for each sample, standard deviation reported

2) Was decadic or Napierian absorption reported? The raw absorbance values should always be reported with the data.

Raw decadic absorbance reported

3) What type of corrections were applied to the data? If the data was null corrected, the method should be described containing information on the wavelength region the null correction was calculated from and its value. If the instrument baseline drifted during the analysis and a final MilliQ scan was used to correct the data, this should be documented and reported. The information provided should allow data users to take the raw data scans and calculate the final absorption reported by the user.

Null correction is the mean absorbance between 650-680 nm

4) If the spectral slope is reported, what was the range and method for calculating the slope? Was it a linear fit to log transformed data or a nonlinear exponential fitting routine? The absorption can be null corrected, however, the raw absorbance values should be reported without the null correction applied.

IV. (If applicable) Waveguide-specific Reporting:

1. The salinity correction method should be well documented. What type of salt solution(s) were used for the correction (artificial sea water, NaCl, etc.)? Was the sample measured with a matched salinity reference or was MilliQ used as a reference and the sample was later corrected with a salt solution spectra or curve?

2. Scan settings should be reported (integration time, accumulations per scan, smoothing, etc.)

3. How many scans per sample, and were the average and standard deviation reported?

V. (Do not fill in) Reporting Guidelines & Reminders:

1. The entire raw scan of absorbance should be reported for each discrete measurement. If multiple scans were measured, the average absorbance can be reported along with the standard deviation.
2. The absorption coefficient may be reported after null correction, smoothing, truncated wavelengths, etc. have been applied. However, this or another documentation file should be provided describing the methods for collection, filtration, analysis, etc. steps needed to calculate the final absorption spectra.
3. If you performed a null correction, or wish to report a calculated spectral slope, is helpful to include the calculated values in the metadata header (and include more details on how they were calculated in your documentation.)
 - If a null correction was applied, use the form: /null_correction=ag:0.0076.
 - To report “s_ag”, include the wavelength range used for the calculation as part of the name, e.g., “s_ag_300nmmin_600nmmax”. If only 1 s_ag is applicable to the entire data file, then store the information in the metadata headers using the form “/s_ag=s_ag_#nmmin_#nmmax:VALUE”, replacing # and VALUE with the relevant numbers.
4. Typical fields in a CDOM spectra file include: wavelength, abs_ag, abs_ag_sd, ag